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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,393	08/14/2001	Tim Wilkinson	TRAS-550	1577

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EXAMINER

LE, BRIAN Q

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,393

Applicant(s)

WILKINSON ET AL.

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 7, 8, 25 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-24, and 27-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment and Arguments

1. Applicant's amendment filed January 24, 2005, has been entered and made of record.
2. The Examiner believes the Applicant made a typographical error on the "Remarks/Arguments" Page indicated on the left most top corner as Application No. 09/925,888. However, this is the Application No. 09/931,393. Please make appropriate correction to this typographical error.
3. Applicant's arguments with regard to claims 1-6, 9-24, and 27-36 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 1, the Applicant argues (page 10) Sakaguchi U.S. Patent No. 5,579,408 does not teach "wherein the integer values are selected from a group of at least four integers, the at least four integers include an integer value corresponding at a closed stroke". This is because the Applicant believes that the cited portions by the Examiner teach an open stroke (FIG. 3A, elements 7-9). The Examiner respectfully disagrees. Sakaguchi teaches both opened and closed strokes. This is clearly indicated by FIG. 2, FIG. 3(a) and FIG. 3(b) (First character is an opened stroke and second character is closed stroke). From the figures, one skilled in the art would clearly see that a group of at least 4 integers that represent either opened or closed strokes. Thus, Sakaguchi clearly teaches the claimed limitation. Regarding claims 18-19, and 36, please refer back to the discussion above. Regarding claims 12 and 29, the Applicant argues (page 11) that the combination of Sakaguchi and Altman does not teach the "the character recognition module is configured to recognize a closed character when the end distance is less than a maximum distance". The Examiner respectfully disagrees. Sakaguchi teaches the method of recognizing both opened and closed strokes (FIG. 2, FIG. 3(a) and FIG. 3(b), column 7, lines 63-67 and

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column 8, lines 1-14). Sakaguchi does not explicitly teach the determining of closed character when the end distance is less than a maximum distance. Altman further teaches a method of recognizing handwriting (strokes) (abstract, first 5 lines) which discloses a method of recognizing strokes (whether opened or closed) if the end distance is less than a maximum distance (threshold) (FIG. 27A, FIG. 27B and column 36, lines 49-60). Modifying Sakaguchi's method of recognizing handwriting according to Altman would be able to determine closed strokes by comparing the end distance to a maximum distance or threshold. It would be obvious for one skilled in the art to apply Altman's concept to determine closed character since if one can use it to determine opened strokes then it would have been obvious for one to use it to determine closed strokes. This would improve processing and therefore, it would have been obvious to one of ordinary skill in the art to modify Sakaguchi according to Altman.

Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 12 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation wherein recognize closed character when the end distance is less than a maximum distance is not

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supported in the original disclosure. The Applicant needs to provide a clear support (page number and line number) in the original disclosure.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 5-6, 13, 15, 19-20, 23-24, 31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakaguchi U.S. Patent No. 5,579,408.

Regarding claim 1, Sakaguchi teaches a handwriting recognition software product (column 1, lines 45-57) product

A computer-readable storage medium having code embodied therein for providing instructions to one or more processors for executing processes (column 3, lines 25-30) on an embedded device (ROM/RAM) (column 3, lines 25-35) which is configured for establishing a network connection to one other computing device (communication with the digitizer which is another device) (column 3, lines 34-48), the code comprising:

(a) code for an encoding module for encoding character strokes input into an input device as integer values (FIG. 4-6); and

(b) code for a character recognition module for recognizing characters from the integer values (registers partial pattern data which are integer values indicating directions of strokes input for recognition processing) (column 2, lines 10-31 and FIG. 10).

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(c) wherein the integer values are selected from a group of at least four integers, the at least four integers include an integer value corresponding to a close stroke. (Sakaguchi teaches both opened and closed strokes. This is clearly indicated by FIG. 2, FIG. 3(a) and FIG. 3(b) (First character is an opened stroke and second character is closed stroke). From the figures, one skilled in the art would clearly see that a group of at least 4 integers that represent either opened or closed strokes. Thus, Sakaguchi clearly teaches the claimed limitation).

For claim 2, Sakaguchi also teaches the handwriting recognition software product of claim 1, wherein the encoding module is configured to encode characters as a series of at least one directional movement performed on the input device (FIG. 2, FIG. 3a-3b and FIG. 4).

Referring to claim 5, Sakaguchi discloses the handwriting recognition software product wherein the at least four integers is at least five integers (numbers of feature stroke data) (FIG. 7, element 73 and column 5, lines 15-22). Also, please refer back to claim 1 for further teachings and explanations.

Regarding claim 6, Sakaguchi also discloses the handwriting recognition software product wherein the at least five integers at least include integers corresponding to four movement directions on the input device (FIG. 2, and FIG. 3a-3b) (FIG. 7, element 73 and column 5, lines 15-22).

Regarding claim 13, Sakaguchi teaches the handwriting recognition software product wherein the character recognition module is configured to recognize multi-stroke Characters (FIG. 7, element 72).

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For claim 15, Sakaguchi teaches the handwriting recognition software product wherein a multi-stroke character is recognized when the character recognition module fails to recognize a single stroke as a character (the process of continue to access to the pattern dictionary to provide alternative recognitions for stroke) (FIG. 10).

For claims 19-20, please refer back to claims 1-2 for the teachings and explanations.

For claims 23-24, please refer back to claims 5-6 for the teachings and explanations.

Regarding claim 31, please refer back to claim 13.

For claim 33, please refer back to claim 15.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-4, 14, 16-18, 21-22, 32, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Sakaguchi U.S. 5,579,408 and Maxted U.S. Patent No. 6,340,967 as applied to claim 1 above.

Regarding claim 3, Sakaguchi teaches the handwriting recognition software product that comprises the extraction of strokes but not the recognition of the termination of a stroke (column 7, lines 13-16). Maxted teaches a handwriting recognition method comprises the recognition module configured to recognize termination of a stroke near a beginning point for recognizing closed characters (The determination of when the pen is up/stroke termination) (FIG. 8A-8B,

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FIG. 9 and column 32, lines 23-25). Modifying Sakaguchi's method of handwriting recognition software according to Maxted would be able to determine the termination of the stroke for better handwriting recognition. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Sakaguchi according to Maxted.

Regarding claim 4, Sakaguchi further teaches the handwriting recognition software product wherein the character recognition module is configured to recognize pen up-down events for encoding multiple stroke characters (column 32, lines 60-67).

For claim 14, Sakaguchi also teaches the handwriting recognition software product wherein a multi-stroke character is recognized when a time between pen-up and pen-down is less than a threshold time, and to recognize that a character is complete when the time between pen-up and pen-down exceeds the threshold time (whether or not the time between pen-up and pen-down exceed/elapses default time) (column 29, lines 35-48). Modifying Sakaguchi's method of handwriting recognition software according to Maxted would be able to further determine pen status and the termination of the stroke for better handwriting recognition. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Sakaguchi according to Maxted.

Regarding claim 16, Maxted further teaches the handwriting recognition software product wherein when a time between pen-up and pen-down exceeds a threshold time and a character is not yet recognized, the character recognition module is configured to reset and Restart (p-timer) (column 27, lines 31-43).

For claim 17, Maxted teaches the handwriting recognition software program wherein a

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plurality of spatial areas are defined on the input device, and the character recognition module recognizes that a character inputted in a spatial area (FIG. 12, element 52) is complete when a pen-down event occurs in a different spatial area (column 32, lines 43-67).

Regarding claim 18, please refer back to claim 1 and 17 for the mentioned limitations. In addition, Maxted teaches a plurality of spatial areas are defined on the input device (FIG. 4).

For claims 21-22, please refer back to claims 3-4 respectively for the teachings and explanations.

For claim 32, please refer back to claim 14.

Regarding claim 34, please refer back to claim 16.

Also to claims 35-36, please refer back to claims 17-18 respectively for the teachings.

10. Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi U.S. Patent No. 5,579,408.

Regarding claim 9, Sakaguchi teaches the handwriting recognition software program wherein each character stroke is recognized as an integer which is represented by less than four bits of information (column 4, lines 35-39 and FIG. 4-FIG.6). Also, it is a designer to have the memory (greater or less than four bits of information) to store the integer value. Thus, it would have been obvious for one skilled in the art to design a memory less than four bits of information to represent integer value of strokes.

For claims 27, please refer back to claim 9 for the teaching and explanation.

11. Claims 10-12, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Sakaguchi U.S. 5,579,408 and Altman U.S. Patent No. 5,613,019 as applied to claim 1 above.

Regarding claim 10, Sakaguchi does not explicitly teach the handwriting recognition software program wherein the character recognition module is configured to recognize a minimum distance between position samples as an instance of a new sample. Altman teaches handwriting recognition method wherein the character recognition module is configured to recognize a minimum distance between position samples as an instance of a new sample (column 35, lines 49-51). Modifying Sakaguchi's method of handwriting recognition software according to Altman would be able to analyze the distance between strokes and predetermined threshold and thus improve the handwriting recognition and display fidelity (column 35, lines 50-60). This would improve processing and therefore, it would have been obvious to one of ordinary skill in the art to modify Sakaguchi according to Altman.

For claim 11, Altman further teaches the handwriting recognition software program wherein the character recognition module is configured to recognize an end distance between a beginning and an ending of a stroke (column 29, lines 1-5).

Regarding claim 12, Altman also teaches the handwriting recognition software program wherein the character recognition module is configured to recognize a closed character when the end distance is less than a maximum distance (column 36, lines 49-54). Sakaguchi teaches the method of recognizing both opened and closed strokes (FIG. 2, FIG. 3(a) and FIG. 3(b), column 7, lines 63-67 and column 8, lines 1-14). Sakaguchi does not explicitly teach the determining of closed character when the end distance is less than a maximum distance. Altman further teaches a method of recognizing handwriting (strokes) (abstract, first 5 lines) which discloses a method of recognizing strokes (whether opened or closed) if the end distance is less than a maximum distance (threshold) (FIG. 27A, FIG. 27B and column 36, lines 49-60).

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Modifying Sakaguchi's method of recognizing handwriting according to Altman would be able to determine closed strokes by comparing the end distance to a maximum distance or threshold. It would be obvious for one skilled in the art to apply Altman's concept to determine closed character since if one can use it to determine opened strokes then it would have been obvious for one to use it to determine closed strokes. This would improve processing and therefore, it would have been obvious to one of ordinary skill in the art to modify Sakaguchi according to Altman.

For claims 28-30, please refer back to claims 10-12 respectively for the teachings and explanations.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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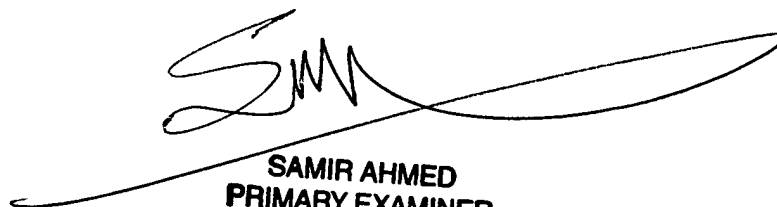
Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL
May 27, 2005



**SAMIR AHMED
PRIMARY EXAMINER**